

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: June 25, 2003, 14:40:41 ; Search time 12.0465 Seconds

(without alignments)  
837.928 Million cell updates/sec

Title: US-09-622-613b-13

Perfect score: 532

Sequence: 1 MSDFLTFQKHLNTRDVC.....TFCVTCENQAPVHFVGHC 105

Scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database: PIR\_73:\*

1: pirl:\*

2: pirl:\*

3: pirl:\*

1: pirl:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length DB	ID	Description
1	551	94.7	104	2 A39035	ribonuclease-relat
2	287	49.3	111	2 A27121	ribonuclease-relat
3	280.5	48.2	111	1 JX0120	pancreatic ribonuc
4	264.5	45.4	111	2 JX0085	pancreatic ribonuc
5	144	24.7	119	2 S41111	pancreatic ribonuc
6	132	22.7	124	1 NRUI	angiotensin [valida
7	128	22.0	125	1 A32474	pancreatic ribonuc
8	126	21.6	128	1 NRCU	pancreatic ribonuc
9	125	21.5	124	1 NRKH	pancreatic ribonuc
10	120	20.6	128	1 NRKS	pancreatic ribonuc
11	120	20.6	128	1 NRGB	pancreatic ribonuc
12	119.5	20.5	145	1 A35332	angiotensin precurs
13	118	20.3	124	1 NRCA	pancreatic ribonuc
14	117	20.1	128	1 NRXY	pancreatic ribonuc
15	116	19.9	125	1 B43825	angiotensin - rabbi
16	114	19.6	124	1 NRHP	pancreatic ribonuc
17	113	19.4	147	1 NRHAG	angiotensin precurs
18	112	19.2	124	1 NRBOB	pancreatic ribonuc
19	112	19.2	124	1 NRPB	pancreatic ribonuc
20	112	19.2	124	2 JCS560	pancreatic ribonuc
21	112	19.2	128	1 NRPO	pancreatic ribonuc
22	112	19.2	150	1 NRBO	pancreatic ribonuc
23	111.5	19.2	147	2 IS2489	ribonuclease 4 (EC
24	111	19.1	128	2 S08549	pancreatic ribonuc
25	111	19.1	128	1 NRHO	pancreatic ribonuc
26	111	19.1	167	2 S20065	pancreatic ribonuc
27	110.5	19.0	123	1 A43825	angiotensin - pig
28	110.5	19.0	155	2 JCS6159	angiotensin - pig
29	110	18.9	124	1 NRGA	pancreatic ribonuc

30	110	18.9	156	2 JCS6160	eosinophil-associa
31	109	18.7	124	1 NRSH	pancreatic ribonuc
32	109	18.7	124	1 NRPH	pancreatic ribonuc
33	109	18.7	124	2 S07141	pancreatic ribonuc
34	108	18.6	124	1 NRWB	pancreatic ribonuc
35	108	18.6	124	1 NRGN	pancreatic ribonuc
36	107	18.4	124	1 NRGF	pancreatic ribonuc
37	105	18.0	124	1 NRDEO	pancreatic ribonuc
38	105	18.0	124	1 NRCA	pancreatic ribonuc
39	105	18.0	124	1 NRCA	pancreatic ribonuc
40	105	18.0	124	1 NRCA	pancreatic ribonuc
41	105	18.0	124	1 NRCA	pancreatic ribonuc
42	104	17.9	124	1 NRHW	pancreatic ribonuc
43	103	17.7	124	1 NRDR	pancreatic ribonuc
44	103	17.7	124	1 NRDR	pancreatic ribonuc
45	103	17.7	124	1 NRKN	pancreatic ribonuc

## ALIGNMENTS

## RESULT 1

A39035 ribonuclease-related anti-tumor protein - northern leopard frog (fragment)

C:Species: Rana pipiens (northern leopard frog)

C:Date: 31-Jul-1991 #sequence\_revision 31-Jul-1991 #text\_change 30-Jun-1993

C:Accession: A39035

R:Rardelt, W.; Mikulski, S.M.; Shogen, K.

J. Biol. Chem. 266, 245-251, 1991

A:Title: Amino acid sequence of an anti-tumor protein from Rana pipiens oocytes and e

A:Reference number: A39035; MUID:91093131; PMID:1985896

A:Accession: A39035

A:Status: preliminary

A:Molecule type: protein

A:Residues: 1-104 <ARD>

C:Superfamily: pancreatic ribonuclease

Query Match 94.7%; Score 551; DB 2; Length 104;

Best Local Similarity 96.1%; Pred. No. 2.4e-48;

Matches 99; Conservative 2; Mismatches 2; Indels 0; Caps 0;

QY 3 DWLTFQKHLNTRDVCNNIMSTNLFHCKDKNTFYISREPVKAIKGIASKNVLTT 62

DB 2 DWLTFQKHLNTRDVCNNIMSTNLFHCKDKNTFYISREPVKAIKGIASKNVLTT 61

QY 63 EFLTSDCNVTSRPRCKYKLRKSTNFCVTCENQAPVHFVGHC 105

DB 62 EFLTSDCNVTSRPRCKYKLRKSTNFCVTCENQAPVHFVGHC 104

## RESULT 2

A27121 ribonuclease-related sialic acid-binding lectin - bullfrog

C:Species: Rana catesbeiana (bullfrog)

C:Date: 19-Nov-1988 #sequence\_revision 19-Nov-1988 #text\_change 30-Jun-1993

C:Accession: A27121

R:Tilani, K.; Takio, K.; Kuwada, M.; Nitta, K.; Sakakibara, F.; Kawachi, H.; Takayan

Biochemistry 26, 2189-2194, 1987

A:Title: Amino acid sequence of sialic acid-binding lectin from frog (Rana catesbeiana

A:Reference number: A27121; MUID:87299649; PMID:3304421

A:Accession: A27121

A:Molecule type: protein

A:Residues: 1-111 <RTT>

C:Superfamily: pancreatic ribonuclease

C:Keywords: lectin

Query Match 49.3%; Score 287; DB 2; Length 111;

Best Local Similarity 49.1%; Pred. No. 8e-22;

Matches 54; Conservative 16; Mismatches 32; Indels 8; Caps 3;

QY 3 DWLTFQKHLNTRDVCNNIMSTNLF---HCKDKNTFYISREPVKAIKGIASKN 58

DB 2 NMAFTFOCKHIIINPIINCNTIMNNIYVGGCKRVNFTIISATVKAICTGVI-MN 60

OY 59 LTTSEFYISDC---NVTSRPCKYKLLKSTNFCVTCENQAVHFGVCHC 105  
 DB 61 LSTRFOLNCTRTSITPRPCPYSSRPTETNVCVKCENQYVHFGAGIGRC 110

## RESULT 3

JX0120

ribonuclease-related static acid-binding lectin - Japanese frog

C:Species: Rana japonica (Japanese frog)

C:Date: 10-Sep-1999 #sequence\_revision 10-Sep-1999 #text\_change 10-Sep-1999

C:Accession: JX0120

R:Kamiya, Y.; Oyama, F.; Oyama, R.; Sakakibara, F.; Nitta, K.; Kawachi, H.; Takayanagi, J. Biochem. 108, 139-143, 1990

A:Title: Amino acid sequence of a lectin from Japanese frog (Rana japonica) eggs.

A:Reference number: JX0120; MUID:91035319; PMID:2229005

A:Accession: JX0120

A:Molecule type: protein

A:Residues: 1-111 &lt;RKM&gt;

A:Experimental source: egg

C:Superfamily: pancreatic ribonuclease

C:Keywords: lectin; pyroglyutamic acid

F:1/Modified site: pyroglutamate carboxylic acid (Gln) #status experimental

F:19-72,34-82,52-97,94-111/Disulfide bonds: #status experimental

## Query Match

Best Local Similarity 48.2%; Score 280.5; DB 1; Length 111;

Matches 49; Conservative 19; Mismatches 35; Indels 7; Gaps 2;

OY 3 DMLTFQKKHLNTRDVCNNIMSTNLF---HCKDKNTFYSPPEPKAICGIIASKNV 58

DB 2 NMAKFEKHIPTNSINTNTIMDKSIYVGGCKERTHTFISSATVYKAICSGASTNRNV 61

OY 59 LTTSEFYISDC---NVTSRPCKYKLLKSTNFCVTCENQAVHFGVCHC 105

DB 62 LSTRFOLNCTRTSITPRPCPYSSRPTETNVCVKCENQYVHFGAGIGRC 111

## RESULT 4

JX0085

pancreatic ribonuclease (EC 3.1.27.5) - bullfrog

C:Species: Rana catesbeiana (bullfrog)

C:Date: 07-Sep-1990 #sequence\_revision 07-Sep-1990 #text\_change 05-Aug-1994

C:Accession: JX0085

R:Nitta, R.; Katsuyama, N.; Okabe, Y.; Iwama, M.; Watanabe, H.; Abe, Y.; Okazaki, T.; Ohg

J. Biochem. 106, 729-735, 1989

A:Title: Primary structure of a ribonuclease from bullfrog (Rana catesbeiana) liver.

A:Reference number: JX0085; MUID:90130374; PMID:2613682

A:Accession: JX0085

A:Molecule type: protein

A:Residues: 1-111 &lt;NTY&gt;

C:Superfamily: pancreatic ribonuclease

C:Keywords: hydrolase; pyroglyutamic acid

F:1/Modified site: pyroglutamate carboxylic acid (Gln) #status experimental

F:10-35,104/Active site: His, Lys, His #status predicted

F:19-72,34-82,52-97,94-111/Disulfide bonds: #status predicted

## Query Match

Best Local Similarity 45.4%; Score 264.5; DB 2; Length 111;

Matches 47; Conservative 19; Mismatches 37; Indels 7; Gaps 2;

OY 3 DMLTFQKKHLNTRDVCNNIMSTNLF---HCKDKNTFYSPPEPKAICGIIASKNV 58

DB 2 NMAKFEKHIPTNSINTNTIMDKSIYVGGCKERTHTFISSATVYKAICSGASTNRNV 61

OY 59 LTTSEFYISDC---NVTSRPCKYKLLKSTNFCVTCENQAVHFGVCHC 105

DB 62 LSTRFOLNCTRTSITPRPCPYSSRPTETNVCVKCENQYVHFGAGIGRC 111

pancreatic ribonuclease - common iguana

C:Species: Iguana iguana (common iguana)  
 C:Date: 19-Mar-1997 #sequence\_revision 19-Mar-1997 #text\_change 21-Aug-1998  
 C:Accession: S41111  
 R:Zhao, W.; Beintema, J.J.; Hofsteenge, J.  
 Eur. J. Biochem. 219, 641-646, 1994  
 A:Title: The amino acid sequence of iguana (Iguana iguana) pancreatic ribonuclease.  
 A:Reference number: S41111; MUID:94139745; PMID:8307028  
 A:Accession: S41111

A:Molecule type: protein

A:Status: preliminary

A:Residues: 1-119 &lt;ZHA&gt;

C:Superfamily: pancreatic ribonuclease

## Query Match

Best Local Similarity 24.7%; Score 144; DB 2; Length 119;

Matches 34; Conservative 19; Mismatches 44; Indels 16; Gaps 5;

OY 3 DMLTFQKKHLNTRDVCNNIMSTNLFHCKDKNTFYSPPEPKAIC--KG 51

DB 2 DWSFQKKHIDYPTASNPNAVCDDMMORRNLPCTKTRNPFVHASPSEIDQVCGSG 61

OY 52 IIAKKNVLTSE--FYLSDC---NVTSRPCKYKLLKSTNFCVTCENQAVHFG 99

DB 62 THVEDNLYDSNESFDLTDCKNVGTAPSSCKINGTRETTRIRIACENNOVHF 114

## RESULT 6

NR01

pancreatic ribonuclease (EC 3.1.27.5) - cuis

N:Alternate names: RNase 1; RNase A

C:Species: Galea musteloides (cuis)

C:Date: 03-Aug-1984 #sequence\_revision 03-Aug-1984 #text\_change 04-Oct-1996

C:Accession: A00827

R:Beintema, J.J.; Neuteboom, B.

J. Mol. Evol. 19, 145-152, 1983

A:Title: Origin of the duplicated ribonuclease gene in guinea-pig: comparison of the

A:Reference number: A92957; MUID:87036770; PMID:6571219

A:Accession: A00827

A:Molecule type: protein

A:Residues: 1-124 &lt;BEI&gt;

A:Note: About one-third of the molecules lacked Ala-1

C:Comment: The cuis is a rodent belonging to the same subfamily as the guinea pig.

C:Superfamily: pancreatic ribonuclease

C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas

F:2,41,119/Active site: His, Lys, His #status predicted

F:56-84,40-95,58-110,65-72/Disulfide bonds: #status predicted

F:94/Binding site: carboxylate (Asn) (covalent) #status absent

## Query Match

Best Local Similarity 22.7%; Score 132; DB 1; Length 124;

Matches 38; Conservative 18; Mismatches 36; Indels 32; Gaps 7;

OY 2 SDMLTFQKKHLNTRDVCNNIMSTNLFHCKDKNTFYSPPEPKAICG 51

DB 3 SSAMKFGQGHDSDDHPTINTN--YCNEMVRRSMFGRCRQVNTFVEPLEAVQAVC-- 58

OY 52 IIAKKNV-----LTTSEFYISDCNVTSRP---CKYKLLKSTNFCVTCEN--QA 95

DB 59 --SOKNVPCKNQGTNCYOSHSSMRITDCRVYSSSKYPRMGMQAKSIIVACGRTSV 116

OY 96 PVHF 99

DB 117 PVHF 120

pancreatic ribonuclease (EC 3.1.27.5)

pancreatic ribonuclease (EC 3.1.27.5)

R:Bond, M.D.: Strydom, D.J.  
 Biochemistry 28, 6110-6113, 1989  
 A:Title: Amino acid sequence of bovine angiotensin.  
 A:Reference number: A32474; PMID:89375344; PMID:2775757  
 A:Accession: A32474  
 A:Molecule type: protein  
 A:Residues: 1-125 <BON>  
 A:Experimental source: plasma  
 R:Maes, P.; Damart, D.; Rommens, C.; Montreuil, J.; Spik, G.; Tartar, A.  
 FEBS Lett. 241, 41-45, 1988  
 A:Title: The complete amino acid sequence of bovine milk angiotensin.  
 A:Reference number: S02001; PMID:89065101; PMID:3197838  
 A:Accession: S02001  
 A:Molecule type: protein  
 A:Residues: 1-125 <MAE>  
 A:Experimental source: milk  
 R:Ahariya, K.R.; Shapiro, R.; Riordan, J.F.; Vallée, B.L.  
 Submitted to the Brookhaven Protein Data Bank, January 1995  
 A:Reference number: A65065; PDB:1NGI  
 A:Contents: annotation; X-ray crystallography, 1.5 angstroms, residues 1-125  
 Proc. Natl. Acad. Sci. U.S.A. 92, 2949-2953, 1995  
 R:Ahariya, K.R.; Shapiro, R.; Riordan, J.F.; Vallée, B.L.  
 A:Title: Crystal structure of bovine angiotensin at 1.5 Angstroms resolution.  
 A:Reference number: A58315; PMID:95224057; PMID:7708754  
 A:Contents: annotation; X-ray crystallography, 1.5 angstroms  
 R:Lequin, O.; Alparé, C.; Bontems, F.; Spik, G.; Lallemand, J.Y.  
 Submitted to the Brookhaven Protein Data Bank, April 1996  
 A:Reference number: A65709; PDB:13IO  
 A:Contents: annotation; conformation by (1)H-NMR, residues 1-125  
 R:Lequin, O.; Alparé, C.; Bontems, F.; Spik, G.; Lallemand, J.Y.  
 Biochemistry 35, 8870-8880, 1996  
 A:Title: Solution structure of bovine angiotensin by (1)H nuclear magnetic resonance spec  
 A:Reference number: A58821; PMID:96280645; PMID:868443  
 A:Contents: annotation; conformation by (1)H-NMR  
 R:Reisdorf, C.; Aberger, D.; Bontems, F.; Lallemand, J.Y.; Decottignies, J.P.; Spik, G.  
 Eur. J. Biochem. 224, 811-822, 1994  
 A:Title: Proton resonance assignments and secondary structure of bovine angiotensin.  
 A:Reference number: S48212; PMID:95010071; PMID:7925406  
 A:Contents: annotation; conformation by (1)H-NMR  
 C:Function:  
 A:Description: hydrolyzes tRNA; induces vascularization of normal and malignant tissues  
 C:Superfamily: pancreatic ribonuclease  
 C:Keywords: angiotensin; hydrolase; nucleic acid degradation  
 F:60-68/Region: receptor binding #status predicted  
 F:14,41,119/Active site: His, Lys, His #status predicted  
 F:27-82,40-93,58-108/Disulfide bonds: #status experimental  
 Query Match 22.0%; Score 128; DB 1; Length 125;  
 Best Local Similarity 34.0%; Pred. No. 8.2e-06;  
 Matches 33; Conservative 14; Mismatches 32; Indels 18; Gaps 5;  
 Oy 17 DVDCNNIMSTNLF--HCKDKNTFIYSRPEPKAICGIIASKN-----VLTSFYL 66  
 Db 24 DEICFPMNKKRRLTPCKDKNTFIHGKNNDKAIK---DRNGQPYRGDLRISKSEFOI 79  
 Oy 67 SDC---NVTSR-PCKYKLKSTNTFCVTCENQAPVHF 99  
 Db 80 TCKHKGSSRPRCRGATPDSKVIYVGCENGLPVHF 116  
 RESULT 8  
 NRCU  
 pancreatic ribonuclease (EC 3.1.27.5) - nutria (tentative sequence)  
 N:Alternate names: RNase 1; RNase A  
 C:Species: Myocystor coypu (nutria, coypu)  
 C:Date: 24-Apr-1984 #sequence\_revision 30-Sep-1988 #text\_change 31-Mar-2000  
 C:Accession: A00822  
 R:van den Berg, A.; van den Hende-Timmer, L.; Beintema, J.J.  
 Biochim. Biophys. Acta 453, 400-409, 1976  
 A:Title: Isolation, properties and primary structure of coypu and chinchilla pancreatic  
 A:Reference number: A90612; PMID:77065676; PMID:999896  
 A:Accession: A00822  
 A:Molecule type: protein

A:Residues: 1-128 <VAN>  
 C:Superfamily: pancreatic ribonuclease  
 C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas  
 F:12,41,119/Active site: His, Lys, His #status predicted  
 F:26-84,40-95,58-110,65-72/Disulfide bonds: #status predicted  
 F:34/Binding site: carbohydrate (Asn) (covalent) #status experimental  
 Query Match 21.6%; Score 126; DB 1; Length 128;  
 Best Local Similarity 29.9%; Pred. No. 1.3e-05;  
 Matches 35; Conservative 18; Mismatches 36; Indels 28; Gaps 7;  
 Oy 7 FOKKHL-----TTRVDYDCNNIM-STNLF--HCKDKNTFIYSRPEPKAICGIIASKN 58  
 Db 8 FERQHMDSCSPSTNPAYCNEMKSRMTGRCRKPVTFFHPLADQAVC-----EQKNV 63  
 Oy 59 L-----TTSEFLSDCNVTSRP---CKYKLKSTNTFCVTCENO--APVHF 99  
 Db 64 LCRNGQTCYOSNMHITDCRVTNSDYPNCSFRISOEKSIVVACEGNRPVYVHF 120  
 RESULT 9  
 NRCWK  
 pancreatic ribonuclease (EC 3.1.27.5) - minke whale  
 N:Alternate names: RNase 1; RNase A  
 C:Species: Balaenoptera acutorostrata (minke whale, lesser rorqual)  
 C:Date: 24-Apr-1984 #sequence\_revision 24-Apr-1984 #text\_change 03-Jun-1994  
 C:Accession: A00818  
 R:Emmens, M.; Weiling, G.W.; Beintema, J.J.  
 Biochem. J. 157, 317-323, 1976  
 A:Title: The amino acid sequence of pike whale (lesser rorqual) pancreatic ribonuclease  
 A:Reference number: A00818; PMID:76277855; PMID:962870  
 A:Accession: A00818  
 A:Molecule type: protein  
 A:Residues: 1-124 <EMW>  
 C:Superfamily: pancreatic ribonuclease  
 C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas  
 F:12,41,119/Active site: His, Lys, His #status predicted  
 F:26-84,40-95,58-110,65-72/Disulfide bonds: #status predicted  
 F:76/Binding site: carbohydrate (Asn) (covalent) (partial) #status experimental  
 Query Match 21.5%; Score 125; DB 1; Length 124;  
 Best Local Similarity 28.6%; Pred. No. 1.6e-05;  
 Matches 34; Conservative 15; Mismatches 42; Indels 28; Gaps 6;  
 Oy 5 LTFOKKHLTTRVDY-----CNNIMSTNLF--HCKDKNTFIYSRPEPKAICGIIASK 56  
 Db 6 MKFQROHMDSCSPGNPNVCMQMMRKRMTGRCRKPVTFFHSELDVAVC---SQK 61  
 Oy 57 NVL-----TTSEFLSDCNVTSRP---CKYKLKSTNTFCVTCENO--APVHF 99  
 Db 62 NVLCKNRTNCTYESNTHMTTDCRQTSKRYPCAVYTSQKXKHIIYACGNGPVYVHF 120  
 RESULT 10  
 NRSK  
 pancreatic ribonuclease (EC 3.1.27.5) - casiragua  
 C:Species: Proechimys quaitrae (casiragua)  
 C:Date: 17-Mar-1987 #sequence\_revision 17-Mar-1987 #text\_change 30-Sep-1993  
 C:Accession: A00821  
 R:Beintema, J.J.; Knol, G.; Martena, B.  
 Biochim. Biophys. Acta 705, 102-110, 1982  
 A:Title: The primary structures of pancreatic ribonucleases from African porcupine an  
 A:Reference number: A90644; PMID:83000399; PMID:7115727  
 A:Accession: A00821  
 A:Molecule type: protein  
 A:Residues: 1-128 <BEI>  
 A:Note: residues 67-78 were positioned primarily by homology with other ribonucleases  
 C:Superfamily: pancreatic ribonuclease  
 C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas  
 F:12,41,119/Active site: His, Lys, His #status predicted  
 F:26-84,40-95,58-110,65-72/Disulfide bonds: #status predicted  
 F:34/Binding site: carbohydrate (Asn) (covalent) #status experimental

```

Query Match      20.6%  Score 120:  DB 1:  Length 128;
Best Local Similarity 29.9%:  Pred. No. 5.3e-05;
Matches 35;  Conservative 18;  Mismatches 36;  Indels 28;  Gaps 7;

Oy 7 FQKKHL-----TNRDVDCNNIM--STNLF--HCKDKNFITYSRPEPKAICKGIISKNV 58
      ||::||:  :  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||
Db 8 FQGHIDSSGSPSTNPNVCAMMKSRRNMTGERCKVNFVHEPLADYQAVC----FQKNV 63
      ||::||:  :  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||
Oy 59 -----LITSEFLVSDCNVTSR----FCKYKLRKSTNFTCYTCENO--APVHF 99
      ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||
Db 64 PCKNGOSNCYESTSNMHTDCLRTLSNSKFPDCLVYRTSOEKSIIIVACEGPNYPVHF 120
      ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||

RESULT 11
NRG8P
pancreatic ribonuclease (EC 3.1.27.5) B - guinea pig (tentative sequence)
N:Alternate names: RNase IB
C:Species: Cavia porcellus (guinea pig)
C:Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 31-Mar-2000
C:Accession: A00826
R:Van den Berg, A.; Van den Hende-Timmer, L.; Hofsteenge, J.; Gaastera, W.; Beintema, J.J.
Eur. J. Biochem. 75, 91-100, 1977
A:Title: Guinea pig pancreatic ribonucleases. Isolation, properties, primary structure
A:Reference number: A91247; MUID:77185023; PMID:862624
A:Molecule type: protein
A:Accession: A00826
A:Residues: 1-128 <VAN>
A:Note: 64-Pro was also found
C:Superfamily: pancreatic ribonuclease
C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
F:12,41,119/Active site: His, Lys, His #status predicted
F:21,34/binding site: carboxylate (Asn) (covalent) #status experimental
F:26-84,40-95,58-110,65-72/disulfide bonds: #status predicted

Query Match      20.6%  Score 120:  DB 1:  Length 128;
Best Local Similarity 28.5%:  Pred. No. 5.3e-05;
Matches 35;  Conservative 21;  Mismatches 37;  Indels 30;  Gaps 7;

Oy 2 SDMLTFQKKHL-----TNRDVDCNNIM--STNLFHCKDKNFITYSRPEPKAICKGI 52
      |  ||::||:  :  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||
Db 3 SSAMKFOROHMDEGSPSNSNMY-CNYMMIRRMTOGRCKPYNFVHESLADYQAVC--- 58
      ||::||:  :  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||
Oy 53 IASKNVL-----TTSEFLVSDCNVTSR----CKYKLRKSTNFTCYTCENO--AP 96
      ||::||:  :  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||
Db 59 -FQKNVLCCKNGQNCIOISYRMRTIDCRVITSSKFPNCSYRMSQAKSITIVACEGDPYVP 117
      ||::||:  :  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||
Oy 97 VHF 99
      ||  ||
Db 118 VHF 120

RESULT 12
A35932
angiogenin precursor - mouse
N:Alternate names: angiogenesis factor
N:Contains: ribonuclease (EC 3.1.27.-)
C:Species: Mus musculus (house mouse)
C:Date: 09-Nov-1990 #sequence_revision 09-Nov-1990 #text_change 18-Jun-1999
C:Accession: A35932
R:Bond, M.D.; Vaillie, B.L.
Biochem. Biophys. Res. Commun. 171, 988-995, 1990
A:Title: Isolation and sequencing of mouse angiogenin DNA.
A:Reference number: A35932; MUID:91025023; PMID:2222458
A:Accession: A35932
A:Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 1-145 <BON>
A:Cross-references: GB:U22516; NID:g726325; PIDN:AAA91366.1; PID:g726326
C:Genetics:
A:Introns: #status absent
C:Function:
A:Description: hydrolyzes tRNA; induces vascularization of normal and malignant tissues
C:Superfamily: pancreatic ribonuclease

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C:Keywords: angiogenesis; hydrolase; nucleic acid degradation; pyroglutamic acid
F:21-24/Domain: signal sequence #status predicted <SIG>
F:25-145/Product: angiotensin #status predicted <MAY>
F:25/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predicted
F:37_64.137/Active site: His_Lys_His #status predicted
F:50-104_63-115_81-130/Disulfide bonds: #status predicted

Query Match          20.5%; Score 119.5; DB 1; Length 145;
Best Local Similarity 30.8%; Pred. No. 6.8e-05;
Matches      33; Conservative    12; Mismatches     45; Indels      17; Gaps       5;

QY   10 KHLTNRTPVD-----CNINMTNLF--HCKNKPIRYRPAPKVC--KGIIASKN 57
    ||| :||::||| |::||| ||| |||::|:|||| |:|
DB   32 KFLTDHHAKRKGRDRRCERMKRRSLTSCKDKVNTFTIHCKSNIKAIICANGSPHYRN 91
    . . . . . : . . . . . : . . . . . : . . . . .

QY   58 V-LTTSEFYLSDCNVTS---RPEKKYLKSTNFPCYTCEQAQPVP 99
    . . . . . : . . . . . : . . . . . : . . . . .
DB   92 LRMSKSPFOVTCTKHGTGSPPRCQCYRASAGFRHVIVACENGELPVHF 138
    . . . . . : . . . . . : . . . . . : . . . . .

RESULT 13
NRFB
pancreatic ribonuclease (EC 3.1.27.5) - Chinchilla brevicauda (tentative sequence)
N:Alternate names: RNase 1; RNase A
C:Species: Chinchilla brevicauda, Chinchilla lanigera brevicauda
C>Date: 24-Apr-1984 #sequence_revision 30-Sep-1988 #text_change 31-Mar-2000
A:Accession: A00820
R:van den Berg, A.; van den Hende-Timmer, L.; Beintema, J.J.
Biochim. Biophys. Acta 453, 400-409, 1976
A>Title: Isolation, properties and primary structure of coypu and chinchilla pancreatic
A:Reference number: A90612; MUID:77065676; PMID:998996
A:Molecule type: protein
A:Residues: 1-124 <VAN>
A>Note: a second component of chinchilla ribonuclease has 32-Asp
C:Superfamily: pancreatic ribonuclease
C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
F:12_41_119/Active site: His_Lys_His #status predicted
F:26-84_40-95_58-110_65-72/Disulfide bonds: #status predicted
F:34/Binding site: carbohydrate (Asn) (covalent) #status experimental

Query Match          20.3%; Score 118; DB 1; Length 124;
Best Local Similarity 27.0%; Pred. No. 8.2e-05;
Matches      33; Conservative    19; Mismatches     42; Indels      28; Gaps       6;

QY   2 SDMLTFQKKNL----TNTRDVDCNNIM---STMFLFKDKNFIYSRPEPKATCGII 53
    | :||::|| :|| ::||| ::||| |||::|:|||| |:|
DB   3 SSAMKEFGQHMDSSGSPSTNANYCENEMKGNMGTCYPVNPTFVEPLADYQAVC---- 58
    . . . . . : . . . . . : . . . . . : . . . . .

QY   54 ASKNV-----LTTSEFYLSDCNVTSNP---CKYLIKSTNFPYCETENO--APV 97
    ||| :||::||| |::||| ||| |||::|:|||| |:|
DB   59 FOKNPNCKNGSNCYSNSNMHTDCRLTSKYPCNSYRSRENKGIIVACEGDPYVP 118
    . . . . . : . . . . . : . . . . . : . . . . .

QY   98 HF 99
    ||
DB   119 HF 120

RESULT 14
NRNY
pancreatic ribonuclease (EC 3.1.27.5) - capybara
N:Alternate names: RNase 1; RNase A
C:Species: Hydrochaeris hydrochaeris (capybara, carpincho)
C>Date: 03-Aug-1984 #sequence_revision 03-Aug-1984 #text_change 29-Oct-1999
A:Accession: A00824
R:Beintema, J.J.; Neuteboom, B.
J. Mol. Evol. 19, 145-152, 1983
A>Title: Origin of the duplicated ribonuclease gene in guinea-pig: comparison of the
A:Reference number: A92957; MUID:87036770; PMID:6571219
A:Molecule type: protein
A:Residues: 1-128 <BEI>
C:Superfamily: pancreatic ribonuclease
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